Issue 49 June 2026

Cactus & succulent REVIEW

The online magazine for cactus and succulent enthusiasts

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Beautiful Epiphyllum hybrids
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The front cover features It's a Sin one of Frank Süpplie's 'Beautiful Epiphyllum hybrids'. See page 45.

It's a Sin FAS 2023

Description: Inner petals yellow with pale yellow mid-stripe. Outer petals dark yellow and loose hanging. Overlapping, cup and saucer form. Tall, basket, flat, and three-angled growth. (XL) 'The Volunteers' × 'Harlekin'.
Registration number ESA #15437Y

Notes: The song It's a Sin is by the British synth-pop duo Pet Shop Boys, 1987

Editor's NOTES

Welcome to the June issue of the Cactus and Succulent Review

Gymnocactus beguinii growing in a woodland habitat see The Sierra Madre Oriental page 8

They say a picture is worth a thousand words and so in this issue I am pleased to feature pictures by Frank Süpplie of his stunning *Epiphylum* hybrids.

So how is it possible to create such plants. Well Ed Seeley does it his way, with *Echinopsis*. Following his previous article on growing *Echinopsis* hybrids, (see *Cactus and Succulent Review*, Issue 45, June 2025) he explains the way he plans his succesful breeding programme.

Did you know that America is moving away from us at the rate of about one inch a year? No neither did I, until I read Alan Brown's article on the Sierra Madre Oriental in Mexico (see page 8).

The picture on the left was taken in a meadow on the edge of a wooded area, one of three different types of cactus habitat that Alan looks at in his article.

Mexico is one of the 17 recognised 'megadiverse' countries in the world. To qualify as such a country must have at least 5,000 species of endemic plants and border marine ecosystems.

As always at this time of year plans for the Cactus at the Castle event at Lullingstone Castle are well underway. See page 4 for more information and page 63 for details of how to claim reduced price entry for Cactus and Succulent Review readers.

Sheila Cude

Cactus & Succulent REVIEW

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The *Cactus and Succulent Review* is a free quarterly magazine published in pdf format in March, June, September and December.

Contact Sheila Cude

Back issues

All back issues are available to download from the website.

See page 63

Cactus at the Castle 2026

UK's largest annual cactus event

Saturday 5 & Sunday 6 September
11.00am to 5.00pm

Cactus Mart — SAT & SUN
Featuring **three marquees** *plus* outdoor sales space

Demonstrations — SAT & SUN
Graham Charles – cultivation hints

World Garden Tours — SAT & SUN
With **Tom Hart Dyke**

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Got a plant to sell?
Bring it along to our popular auction

A Tribute to Tony Mace — SAT ONLY
The late Dr. Tony Mace was a lifelong supporter and Trustee of the BCSS.

In his honour we present a series of short talks on plants in which he had a particular interest including opuntiods and notocacti.

Admission
Adults **£15.00*** Under 16s **FREE**
BCSS members **£12.00***
*One day entry – Saturday or Sunday

SPECIAL OFFER

Cactus&Succulent REVIEW

Half price entry for Cactus & Succulent Review readers

See page 63 for details of how to apply

The Haworthia Growers UK Show — SUN ONLY
See some of the finest haworthias and allied genera in the group's first ever show.

Download the Show Schedule
Cactus at the Castle
HGUK
or scan the QR code

A talk on haworthias — SUN ONLY
By **Adrian Weatherill**
Based on 40 years experience, Adrian will talk about haworthias in cultivation and how best to grow them.

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Mexican street food

The Blue Agave Bar
Serving a wide range of Mexican inspired cocktails and Harvey's fine Sussex ales.

Lullingstone's
Mexican Funday Sunday

Mariachi Band
Mexican-themed games
Treasure hunt
Facepainting

Cactus at the Castle

Lullingstone Castle, Eynsford, Kent DA4 OJA

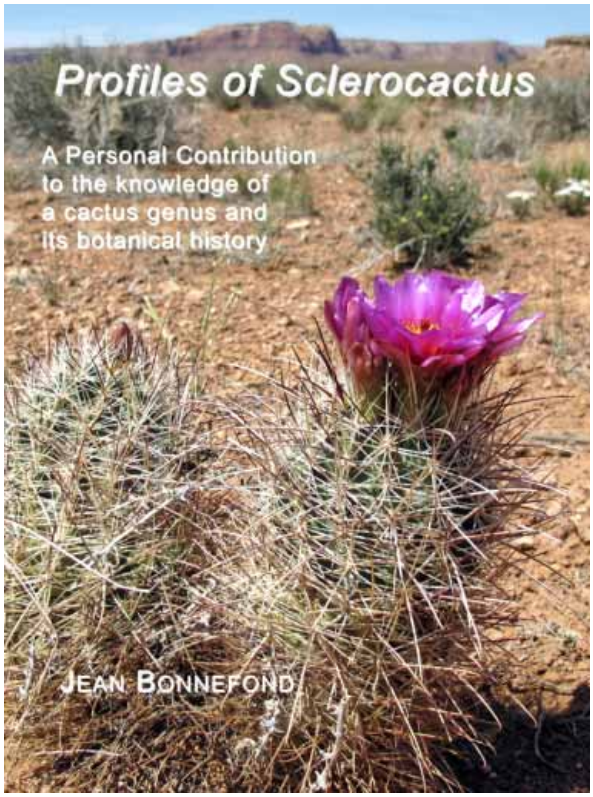
Cactus at the Castle

Profiles of Sclerocactus

A Personal Contribution to the knowledge of a cactus genus and its botanical history

by Jean Bonnefond

Reviewed by Ian Woolnough



Published by The Gordon Rowley Foundation 2025
ISBN 978-1-0684007-1-1
Softcover; 160 pages 280 x 210mm 192 colour figures
One B+W full page figure showing spine form and 13 B+W spine drawings.
One table and two colour maps. English language.
Price £28 (plus £4 p&p in the UK) from the Gordon Rowley Foundation

Jean started off as a management accountant, then Fleet Manager, for a major Bank and Insurance Company and, through work, was able to travel to the United States in the 1970s where he first discovered the American West and its deserts.

This led to a fascination for the landscapes and National Parks he visited and the cacti encountered there including *Ferocactus*. From the 2000s onwards *Pediocactus* and *Sclerocactus* became his focus and he made many trips devoted to finding, studying and photographing *Sclerocactus*, in particular, in habitat.

The information and pictures he accumulated became the basis for a lecture given at ELK in 2017 entitled '*Sclerocactus* in habitat'. Since then Jean has given many presentations and written many articles over the years.

The start of producing something for a book was during Covid in 2020 and in Jean's words it is intended "to help bear witness to the presence and beauty of these cacti in their natural habitats and is not a book devoted to their cultivation outside their natural habitat". It is "intended to be a book of photographs set in an historical context". Now retired, this shy and unassuming man still grows these plants in his native France.

The first thing to say about this book is the sumptuous photography which captures, not just the plants, many in full flower, but also the stunning scenery and environments in which they grow. Pictures are large and well-reproduced to do the excellent photography full justice.

This isn't a book structured in a conventional way, rather the plants are discussed by their botanical history. So it kicks off with those species recognised by N. L. Britton and J. N. Rose (1920-1950) and ends with J. Mark Porter and Linda M. Prince (2010-2023). In between are the luminaries Lyman David Benson (1950-1980), Fritz Hochstatter (1980-2000) and Kenneth D. Heil (2000-2010).

This might at first seem rather unorthodox, but it does provide a nice framework through which the plants are discussed although it means that species are spread throughout the book, which may not be to everyone's taste. For me at least, however, the clear photographic index prevents this from being an issue.

The book is not, and was never intended to be, a monograph on *Sclerocactus* in the wider sense so what were formerly known as *Ancistrocactus* and *Echinomastus* are not included although some of the cacti that grow with the *Sclerocactus* he covers are included.

The index of photographs lists 19 *Sclerocactus* and three *Pediocactus* and the book is a photographic record of these plants, many of which are sadly disappearing together with their environment.

Throughout it there are many interesting historical and factual snippets as well as observations which makes it an informative and interesting read. It is obvious that the author has travelled extensively, performed copious research and has a great affinity with the plants. There is a comprehensive reference section should anyone wish to source further information.

Anyone who has visited these habitats will have great memories rekindled by reading this book or be encouraged to visit these areas if they have not yet done so. The photography, text and line drawings will help people identify plants encountered in the field and provide context.

The soft cover format isn't as robust as a hard cover would have been but given the price this is to be expected.

Having been fortunate enough to have visited many of the areas covered I would say that the habitat map shown isn't quite right but, apart from that, and a couple of photographs, that include the shadow of the photographer, it is hard to find fault with this book.

In summary this is a beautifully illustrated book that summarises the history of *Sclerocactus* in the stricter sense from an informed perspective and is a welcome addition for anyone interested in these plants and their environment.

Copies are available directly from the Gordon Rowley Foundation at a cost of £28 (plus £4 p&p in the UK).

Contact rowley.library@btinternet.com

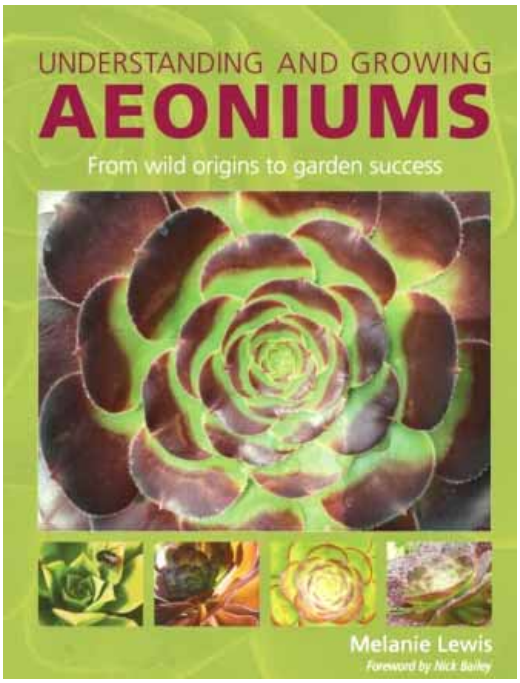
Also from Keith's Cactus Books

Understanding and growing Aeoniums

by Melanie Lewis

Reviewed by Sandra Williams

Published by The Crowood Press 2026
ISBN 9780719846007
Softcover; 160 pages 246 x 189mm English language.
Recommended price £16.99



This book has been long awaited and, in my opinion, much needed. Having grown succulents for more than 20 years at Corseside Nursery in Pembrokeshire, I've seen firsthand how many growers in the UK struggle to find clear, relevant guidance on aeonium care. There are other books about aeoniums written by growers around the world, but this one by Mellie Lewis, who holds a national collection of *Aeonium*, is the first (as far as I'm aware) written in the UK specifically for people who grow them here.

As aeoniums are not native to our shores, caring for them here is very different from growing them in their natural habitats. As a succulent seller, I'm often asked how best to look after the many varieties now available in the UK. Mellie gently guides the reader through the growing conditions aeoniums need to thrive in our climate, offering clear, accessible advice. She delves into the history of the plants and their care requirements without ever becoming overly technical, making the book both informative and enjoyable to read.

Her passion for these succulents shines through as she explains their origins, helping the reader understand their needs and, in turn, how to provide the best growing conditions for them to flourish in our climate.

With so many wonderful varieties of *Aeonium* available, the book does an excellent job of showcasing both the classic favourites and the exciting newer members of the *Aeonium* family. Whether you're searching for a spectacular, statement-making giant or a lower-growing, spreading variety, this book clearly explains what each type offers.

When I sell a plant, buyers often ask how to care for it so it will truly flourish. I'll certainly be directing my customers to this book, confident that it will help them get the very best out of their aeoniums.

Visit Corseside Nursery

Corseside Nursery Facebook

Available from Keith's Cactus Books price £15

Edgar Lamb FRHS

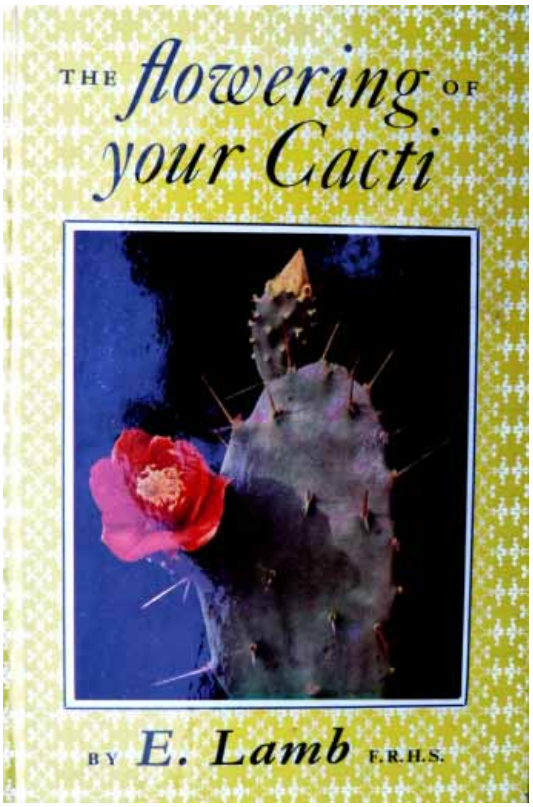
by Len Newton

Several books on our favourite plants were published by Edgar Lamb (1905–1980). On the title page of some of his books (see right) he was shown as E. Lamb F.R.H.S.

This indicates that he was a Fellow of the Royal Horticultural Society. It might sound like an award, or a degree, but in those early days all members of the Royal Horticultural Society (RHS) were referred to as Fellows, as was the case when I joined.

The first day of the Chelsea Flower Show was for RHS members only, and it was referred to as Fellows' Day. The general public were allowed in only from the second day. There were very many members, however, and I found that the show grounds were very crowded on Fellows' Day.

The term Fellow is no longer used, and now members are just members. The membership card issued now to members has just "RHS MEMBER" on the front.



The Exotic Collection

by Sheila Cude

How many people, particularly those in the UK, remember the Exotic Collection, run by Edgar and Brian Lamb in Worthing?

Edgar Lamb wrote a number of books, as well as the one shown above, of which the five volumes of *The Illustrated Reference on Cacti and Other Succulents*, together with the companion volume *Stapeliads in Cultivation* are perhaps the best known.

Writing in the preface to the first volume of the 'Illustrated Reference' in 1955, Edgar Lamb states that "my interest, however, goes back nearly twenty-five years to the start of my Collection." In the preface to Volume Two published in 1959 he states "When I wrote the preface for Volume 1 my collection numbered around 3,000 different species; to this about 1,000 more species have been added..."

At this time the collection had a "growing area under glass of over 7,000 square feet" while the stapeliad collection of over 400 species was the largest collection of these plants in the world.

Also in 1959 Edgar Lamb wrote for the *The National Cactus and Succulent Journa*l, Vol. 14, No. 1 March 1959 describing his outdoor rockery, where he was growing a number of hardy cacti and succulents.

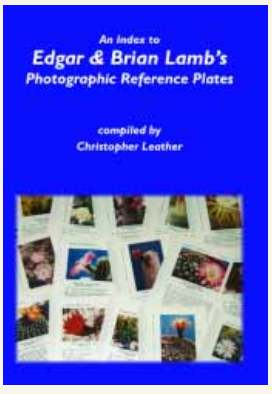
There were also the Monthly Notes and Photographic Reference plates to look forward to. For the princely sum of £1 5s 0d (£1.25) a year (in 1955) a subscriber received two new Reference plates and an eight page 'Monthly Notes' each month. Back in the day colour printing was sadly lacking compared to that of today, but there was usually something of interest in the package.

There were plants available as well, with species that I could not possibly have obtained elsewhere.

Edgar Lamb died in 1980 after a short illness. The Exotic Collection closed in 1987 when Brian Lamb moved to Spain and became curator of the Alameda Gardens in Gibralter. It seems that many plants from the Exotic Collection, 20 tons of them in fact, were moved to Spain and grown in his garden there.

More details of the Reference Plates can be found at Cactus Corner.

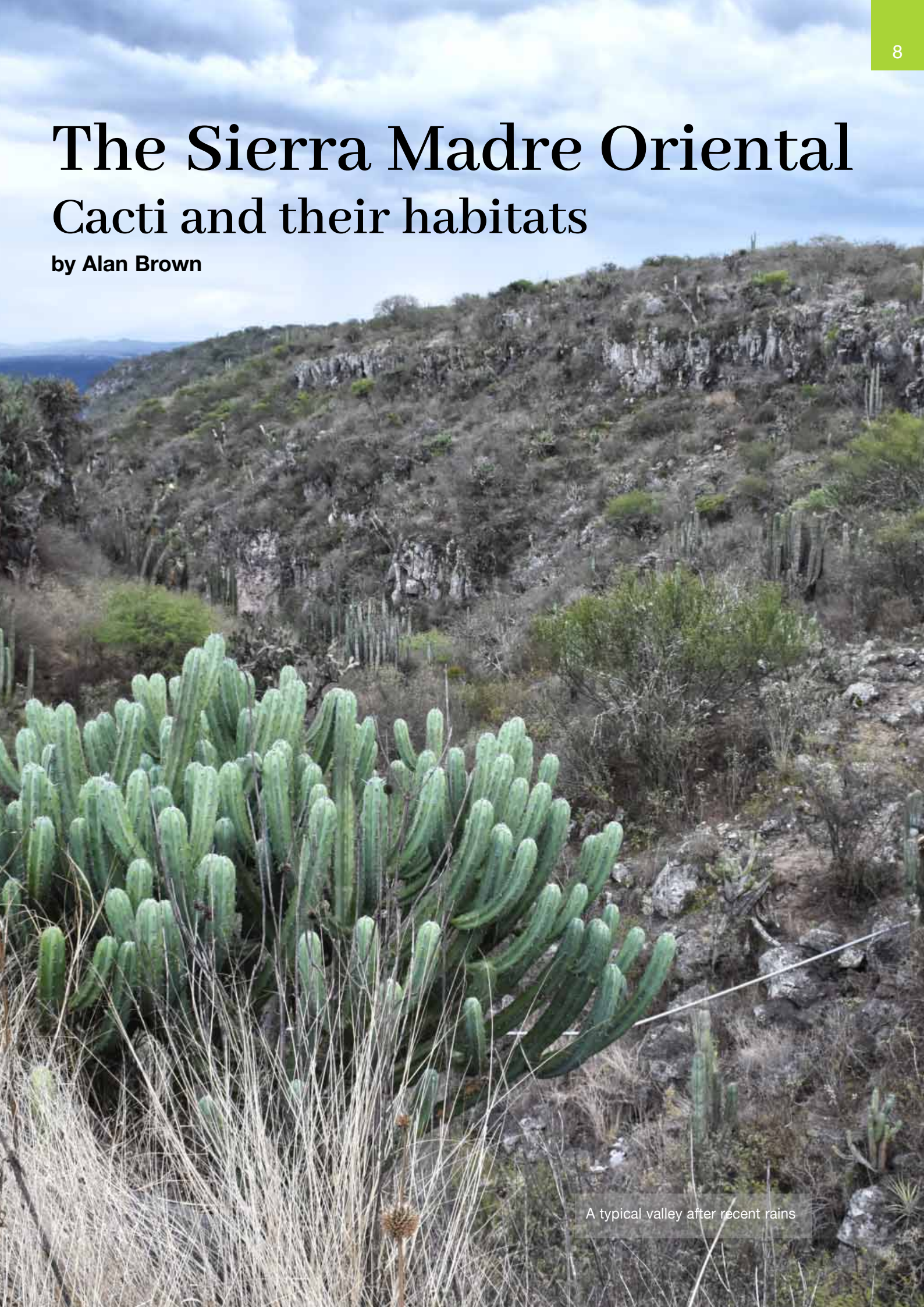
Christopher Leather has compiled an index to Edgar and Brian Lamb's Photographic Reference Plates. Full details of this are available at Cactus Corner books from where it can also be ordered at a cost of £9.99.



The Sierra Madre Oriental

Cacti and their habitats

by Alan Brown



A typical valley after recent rains

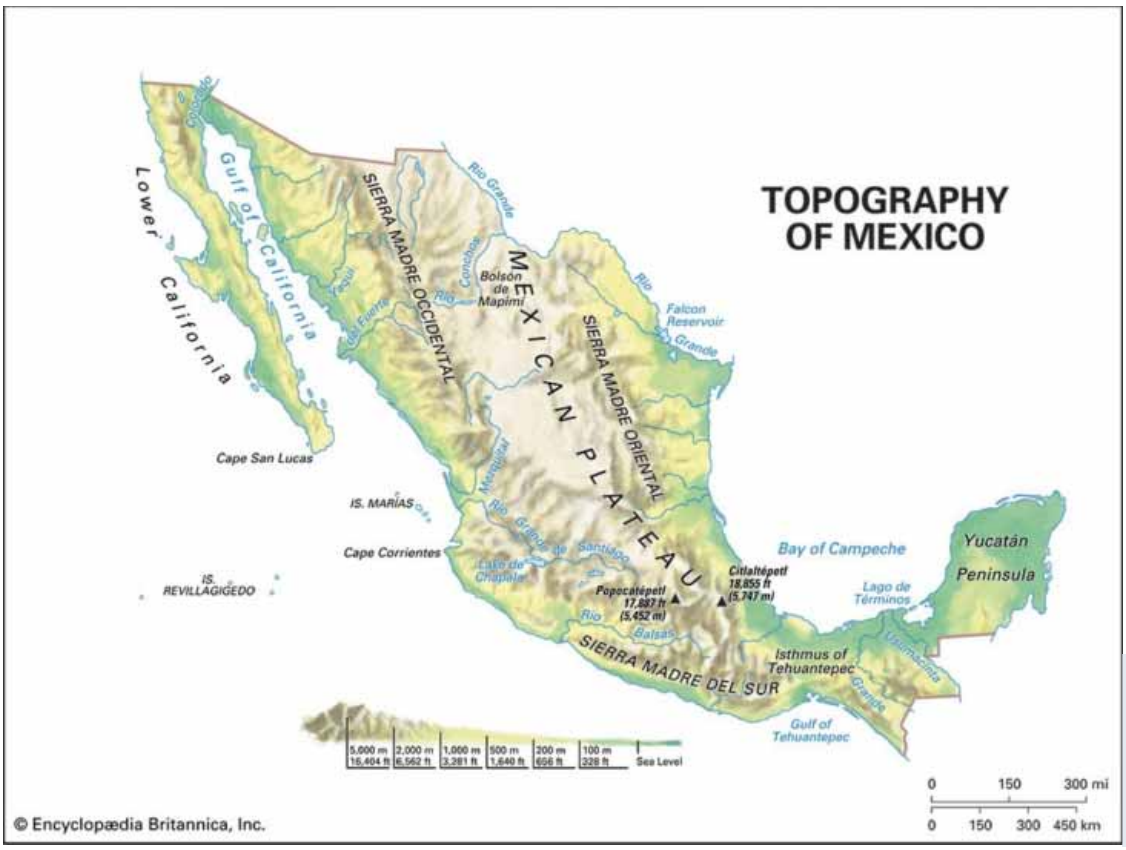
The Atlantic Ocean is getting wider. America is getting further away at about one inch (2.5cm) a year. Interesting, but what has it got to do with cacti?

Over hundreds of millions of years rivers have carried soil and material down into the sea. As the American continent has moved in a west to south-westerly direction its west coast has acted like a big shovel. This has caused sediment to be raised up from beneath the sea to create the Rocky Mountains in the US and also the Sierra Madre mountains of Mexico.

The Mexican mountains sit on the southern edge of the North American continental plate.

The Sierra Madre Oriental are part of this formation having been created over 100 million years ago. It is believed that around 65 million years ago an asteroid hit the Gulf of Mexico causing further cracks and uplifts to the new mountains. It has been suggested that this asteroid was responsible for killing 50% of all the world's living creatures including most of the dinosaurs. Some asteroid!

Cultivated valleys where cacti grow on the higher slopes



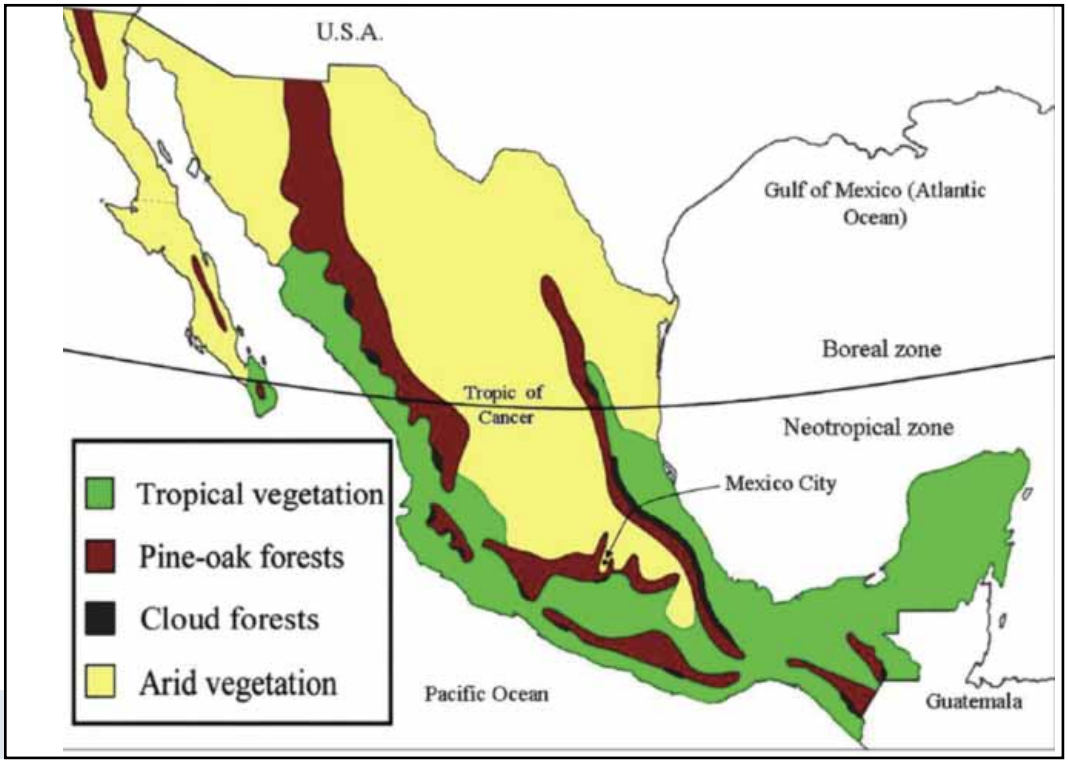
By courtesy of Encyclopædia Britannica, Inc., copyright 2007; used with permission

Comparing the topographic and vegetation maps

The predominant wind is from the north-east. This has passed over the USA, (Mississippi, Louisiana and Texas). It is a very hot and dry wind in summer and can be very cold and dry in winter.

It then passes over the Gulf of Mexico where it is able to pick up moisture. In the north there is little opportunity hence little water but as it moves southwards it covers a greater distance and is wetter.

The wind is then forced to rise over the Sierra Madre mountains. The moisture being deposited on the eastern facing slopes. In the north, with little moisture, the wind is dry, creating vegetation which can thrive in arid conditions.



Vegetation types of Mexico

Moist winds crest the mountain tops then evaporate as they move down the western facing slopes

The north-eastern wind having passed over the mountain tops, falls down on to the Central Plateau and, having lost its moisture, has become a warm dry wind. The rain comes in summer thunderstorms and winter is very dry. The western facing slopes of the Sierra Madre Oriental are home to a variety of cultivated valleys with cacti on the higher slopes, many of which grow on dry limestone pavements

The habitats – limestone

The Sierra Madre Oriental, along Mexico's east coast, are formed of limestone, as evidenced by marine fossils. From deep within the earth, hot magma and lava came towards the surface along the cracks, caused by the asteroid. The heat turned some of the limestone into marble and gypsum. The cracks and weakness in the crust also created the volcanoes for which Mexico is famous.

Pelecyphora aselliformis

A typical limestone habitat

These limestone mountains are now home to some of our choicest cacti including *Astrophytum*, *Epithelantha*, *Obregonia*, *Pelecyphora*, *Strombocactus* and some *Turbinicarpus*.

Most of these cacti are fairly easy to cultivate and are tolerant of most cactus composts, providing you have added plenty of extra drainage. Some genera are considered to be more difficult however.

In habitat they grow on limestone which acts as a giant sponge quickly absorbing the water that falls on to the ground.

If you have difficulty with plants from these mountains you may want to consider adding limestone to your compost or use limestone chips as a top dressing, thus replicating their original habitats.

Ariocarpus scaphirostrus

Thelocactus conothelos

Mammillaria albiflora

Mammillaria candida var. *rosea*

Turbinicarpus schmiedickeanus subsp. *macrochele*

Typical habitat of *Pelecyphora strobiliformis* and (inset) *Pelecyphora strobiliformis*

Gypsum

A few genera are known to come exclusively from gypsum areas. For example *Aztekium*, *Geohintonia*, *Turbinicarpus laui* and *T. lophophoroides*.

So in the same way try adding a small amount of gypsum to your compost. I have tried growing seedling *Turbinicarpus* in 100% gypsum and it was not a success, so I suggest just a small amount may be sufficient.

Aztekium hintonii

Aztekium ritteri

Geohintonia mexicana

Geohintonia mexicana

The habitat for *Turbinicapus* (*Rapicactus*) *zaragoza*e with a herd of goats

Turbinicapus (*Rapicactus*) *zaragozae* coming into flower

Turbinicapus (*Rapicactus*) *zaragozae*

Above: A typical habitat of *Turbinicarpus lophophoroides* and (inset) *Turbinicarpus lophophoroides*

Pine and oak forests

On the east facing flanks with more moisture and higher elevations we find pine and oak forests. Pine needles are acidic when the weather breaks them down. It is surprising to find many cacti growing in this habitat with thin limestone soils which are humus-rich from the decaying pine needles and a higher humidity than the Chihuahuan desert to the west. Cacti from the pine forest areas may benefit from an acidic compost.

Above:
Typical habitat of
Echinocereus knippelianus and (inset)
Echinocereus knippelianus

Ariocarpus retusus

Stenocactus phyllacanthus

To summarise

With a little research and an understanding of their habitats the cacti of the Sierra Madre Oriental become more interesting to cultivate.

Do they grow on limestone, gypsum or in the pine and oak forests? Do they grow on the more moist eastern facing slopes? Do they grow on the dry central plateau?

While most grow successfully in a general cactus compost and normal greenhouse conditions, some that have adapted to the local microclimate and geology, can benefit from a little more care in cultivation. They will all reward you with magnificent colourful flowers. ■

Photos: Alan Brown

Mammillaria possibly *amajacensis*

Woodland habitat of *Stenocactus, Mammillaria* and *Ferocactus*

Kenyan Sansevierias

by Colin C. Walker

Fig. 1

Sansevieria bella, a young plant in my collection

Introduction

Sansevierias are deservedly popular, especially as houseplants, tolerating low light conditions and even neglect, as testified by the ubiquitous specimens of *Sansevieria trifasciata*, unkindly known as mother-in-law's tongues. They can thrive with minimal attention but respond readily when given due care and attention. Many flower easily when small, producing very attractive, usually highly scented spikes. During 25 years of growing these plants I have been rewarded by the flowering of around 30 clones, so this genus comes with a personal recommendation.

The genus has benefitted from the handbook by Webb & Newton (2022), which is, however, now slightly dated. Several new species have been named since its publication, bringing the total number of species to around 100 with more in the pipeline, notably from Tanzania.

Sansevierias have been discussed here on a few occasions but the focus in this article is on Kenyan species of which 10 are showcased. Additionally, a new cultivar is newly named here.

The flora of tropical east Africa, encompassing Kenya, Tanzania and Uganda, is now seen as the centre of diversity of this genus. The genus though has a much wider distribution ranging throughout much of sub-Saharan Africa, then eastwards to Madagascar, north-eastwards to the southern Arabian Peninsula (Yemen, Saudi Arabia and Oman), then to India, Sri Lanka to finally to Myanmar.

Kenya itself is home to around 30 known species (Webb & Newton, 2022), so only a third are discussed here but these amply illustrate the diversity within this genus.

Sansevieria ascendens

This species is one of only a small number belonging to *Sansevieria* subgenus *Paniculatus* characterised by being tall-growing plants with large, well branched (paniculate) inflorescences.

This is the only species discussed here that I have not personally grown. Len Newton (Fig. 2) described this species in *Bradleya* in 2010. It has an unbranched stem up to 1.5m tall and spreads by underground rhizomes. Its leaves are spirally arranged and up to 60cm long bearing pungent 1cm long red-brown spine-like tips. The inflorescence is up to 1m tall and is well-branched. It was named '*ascendens*' after the lateral branches of the inflorescence which curve upwards and hence are ascending. *Sansevieria ascendens* occurs in south-east Kenya and north-east Tanzania.

Fig. 2

Sansevieria ascendens, shown for scale with Len Newton in his Nairobi garden (Photo: Al Laius)

Sansevieria ballyi

This is another Len Newton species named in the *British Cactus and Succulent Society Journal* in 2004 after the renowned Swiss botanist Peter Bally (1895–1980). Bally emigrated to Kenya where he carried out much field work and named many new succulent species from tropical east and north-east Africa. He was especially noted for his work on the genus *Monadenium*, now merged into *Euphorbia*.

Unlike *S. ascendens*, *S. ballyi* is a small, low-growing species that branches freely above ground and hence is amenable for presentation in a hanging basket or pot. It is shown here (Fig. 3) in one of my favourite pots which has a roughened surface that simulates the rocky surfaces amongst which this species presumably grows.

It occurs in south-east Kenya but Webb & Newton (2022) suggest that its distribution probably extends into north-eastern Tanzania. Its inflorescence is unbranched and only about 15cm tall and in my experience good-sized plants flower regularly (Fig. 4). For those growers with only limited space, this is a highly recommended species.

There is also *S. ballyi* var. *robertsoniae*, collected by Len Newton in the company of Ann Robertson, a British botanist resident in Kenya (Webb & Newton, 2022) and named in her honour in 2015. It has paler coloured leaves than the typical variety with a very smooth surface. It occurs in a distinct population at the northern end of the distribution range for the species.

Sansevieria bella

This is the third Len Newton species featured here, named in 2000 for being beautiful in reference to the banding on the leaves which does not fade with age.

This is a large-growing plant and, in my experience, it is also fast-growing (Fig. 5). It is branched modestly above ground and also spreads by runners forming small clumps. Each branch has up to eight leaves that are approximately cylindrical and are more or less distichously arranged, up to 70cm long with prominent cross-banding, roughened surfaces and sharp red-brown tips.

My plant (Fig. 1) has yet to flower but the inflorescence is described as unbranched and up to 60cm tall. *Sansevieria bella* is endemic to the Kenyan rift valley.

Fig. 3

Sansevieria ballyi in an 8cm diameter mock rock pot

Fig. 4

Sansevieria ballyi inflorescence

Fig. 5

Sansevieria bella in Len Newton's Nairobi garden (Photo: Al Laius)

Sansevieria fischeri

This species was named for Gustav A. Fischer, a 19th century German doctor and naturalist who practised medicine in Zanzibar (now part of Tanzania) and explored in Tanzania and Kenya (Webb & Newton, 2022).

This species is included here to illustrate the growth form of several sansevierias. In the juvenile state the leaves form a flattish rosette (Fig. 6) which later develops into erect, tall growing leaves (Fig. 7), the largest of which in my specimen is about 1.4m tall but this species can grow up to 2.4m in height. The leaves are cylindrical and quite variable in colour. Typical clones are prominently cross-banded with darker stripes.

In contrast, I have one very distinct clone (Fig. 7) that has dull blue-green coloured leaves with only feint cross-banding. This I name here as 'Ivor' after the collector from whom I inherited it.

Fig. 6

Sansevieria fischeri, a young plant raised from a leaf cutting

A synonym of this species is *S. singularis*, named because of its mature growth form as 'single' erect leaves. However, the epithet '*fischeri'* has date priority so regrettably the very descriptive name '*singularis*' should not be used.

My plant of 'Ivor' is large but it has never flowered in the 10 years I've grown it. This species belongs to subgenus *Capitatus*, plants of which produce inflorescences from below soil level that are densely packed with flowers and roughly 'head-shaped' (capitate). The inflorescence for this species is only up to 10cm tall.

Sansevieria fischeri occurs in eastern Kenya, north-eastern Tanzania, then northwards to southern Ethiopia and Somalia.

Fig. 7

Sansevieria fischeri 'Ivor': a large mature plant c. 1.4m tall, in a 25cm diameter pot. Compare the dark coloured leaves of this new cultivar to the paler but heavily cross-banded ones shown in Fig. 6

Sansevieria forskaoliana

This species was named in honour of the Finn Pehr Forsskål (1732–1763), the first botanist to visit the Arabian Peninsula in what is now Yemen. Forsskål died of malaria in Yemen in 1763 but his illustrated flora of the region was published posthumously in 1775.

Sansevieria forskaoliana is a broad-leaved species (Fig. 8) that branches by underground rhizomes so it is effectively stemless. In my plant though some of the rhizomes have pushed their way above the soil surface.

Its leaves are up to 60cm long and 7.5cm across but are relatively thin and channelled. I've found this to be a relatively slow-growing species that has yet to flower for me. The unbranched inflorescence is described as up to 95cm tall. This species occurs from the Yemen south through Djibouti, Eritrea, Ethiopia, Somalia into north-eastern Kenya.

Fig. 8

Sansevieria forskaoliana

Sansevieria francisii

Francis (Frank) Horwood (1924–1987) was a well-known British succulent plant collector who emigrated to California in 1975, where he worked at Lotusland and Abbey Garden Nursery. He visited Africa several times, notably Ethiopia, Kenya and Somalia.

In 1982 Frank collected an unidentified *Sansevieria* at Garsen near the coast in Kenya, which was distributed in cultivation under the collection number FKH 432. This was named *S. francisii* in his honour in 1995 by *Sansevieria* specialist Juan Chahinian.

This species has a unique growth form with the spirally-arranged leaves in five tiers (Fig. 9). It is a fast grower that branches freely from the base as stolons and becomes floppy or decumbent with age. The cylindrical leaves are roughened, up to 15cm long and have acute spine-like tips which are 5mm long.

Fig. 9

Sansevieria francisii displayed in a rather unusual 26 cm long planter with a separate 'drip tray'

For me this is one of the most floriferous sansevierias usually flowering annually. The unbranched (simple) inflorescence up 12–25cm tall (Fig. 10) is typical of subgenus *Sansevieria*.

The flowers are densely arranged in groups of three or four. As with most sansevierias, the flowers are nocturnal, each flower opening late in the afternoon and closing the following morning. So, although individual flowers only last a single night, they open in clusters; hence a single inflorescence has flowers open for several days in succession. These flowers presumably attract night flying moths as pollinators. As an attractant they produce a heavy hyacinth-like scent which can pervade a living room at night but subsides by the following morning. Large numbers of droplets of extra-floral nectar are also produced presumably as food for the insect pollinators.

Sansevieria francisii is a Kenyan endemic known only from its type locality in the Tana River Delta of coastal eastern Kenya (Webb & Newton, 2022).

Fig. 10

Sansevieria francisii inflorescence

Sansevieria frequens

This species is stemless but spreads by underground rhizomes. It is a broad-leaved plant with leaves up to 90cm long and 15cm across, typically medium green with little mottling or cross-banding and a smooth surface, sometimes with a bloom (Fig. 11).

Its unbranched inflorescence is 60–90cm tall (Fig. 12) but, unusually for a *Sansevieria,* the flowers are not scented. The species name refers to its widespread distribution as it is frequently found in habitat in Ethiopia, Kenya and Uganda.

Figs. 11 and 12

Sansevieria frequens and (Inset) part of the *S. frequens* inflorescence

Sansevieria gracilis

This species was named for its slender leaves. It has a short stem and spreads readily with stolons (Fig. 13). Its leaves are cylindrical with a groove on the upper surface for much of their length, up to 30cm long and 1cm wide when fully mature. The unbranched inflorescence is up to 30cm tall. The species comes from coastal eastern Kenya and north-eastern Tanzania.

Fig. 13

Sansevieria gracilis

Sansevieria parva

This species was named for the small size of the plants with a short stem only 10–12cm, often hidden by the dense covering of leaves which can be 20–45cm long.

It is rhizomatous and can form large clumps since it is relatively fast-growing (Fig. 14). It is one of the least succulent of all the Kenyan sansevierias and does tend to make a somewhat untidy plant.

The unbranched inflorescence (Fig. 15) is attractive, up to 30cm tall bearing a dense arrangement of pale pinkish-white, mauve tinted flowers with the most intense scent of any *Sansevieria* I have yet flowered. The flowers are especially short lived, opening late afternoon but by 9.00am the next morning they are closed.

Sansevieria parva is endemic to tropical east Africa occurring in all three countries of this region: Kenya, Tanzania and Uganda.

Fig. 14

Sansevieria parva growing in a plastic pan within a 100 year old family heirloom: my aunty's copper jam pan

Fig. 15

Sansevieria parva inflorescence

Fig. 16

Sansevieria pinguicula, recently repotted into an 18cm diameter slow cooker liner with drainage holes drilled in its base to make it into a 'proper' plant container.

Sansevieria pinguicula

This species was previously showcased here (Walker, 2021) but is included again as the most desirable Kenyan species in the genus from a collector's perspective because it is relatively slow growing with highly succulent leaves and hence a great contrast to *S. parva*.

One of my plants has recently been repotted (Fig. 16) hence this image is new compared to the photos used in my previous article. Despite having grown this species for over 20 years, I still have only flowered it once.

Sansevieria pinguicula was first described by Peter Bally in 1964 and is currently considered to be endemic to north-eastern Kenya but according to Webb & Newton (2022) it is likely that it also occurs in south-eastern Somalia.

Looking ahead

As mentioned earlier, tropical East Africa is the centre of diversity for the genus from where several new species have been described recently, notably from Tanzania, home to the Tanzania Sansevieria Foundation. As new regions are explored further new species will undoubtedly be discovered, named, propagated and distributed. The future for sansevierias looks bright indeed.

Photos: Colin C. Walker unless otherwise indicated

Acknowledgements

I thank Al Laius for the use of his photos and, as ever, my wife Marjorie for reading and commenting on an earlier draft of this article.

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Breeding Echinopsis by design

by Ed Seeley

How to develop a programme for successful hybridising

Why bother with a dedicated breeding programme? In my opinion, it is all about increasing the chances of making something worth naming and sharing. Any breeding programme is a numbers game. It's all statistical chances of success so anything you can do to stack the deck in your favour increases the odds of getting something remarkable. This article is a combination of why I believe these principles help and some suggested actions you can take to improve your odds.

Aims

One of the most important principles is to have clear aims, defined in concrete terms, and a plan to achieve those aims. So, for instance, I don't define my aim as 'large flowers' but I set defined diameters. In terms of size, I am currently looking for flowers of at least 10cm.

My second main aim is breeding multicoloured flowers (two or more colours), ideally with strongly contrasting multicoloured petals, e.g. purple bases with yellow ends or orange bases and purple edges.

Finally I am aiming to breed longer-lasting flowers. Again I have set clear criteria for this i.e. flowers that will last three days or more. Obviously this is very dependent on culture and temperature and, I'm starting to think, may be intrinsically linked to size.

When setting aims, I believe it is important to look at other people's results to get an idea of realistic but ambitious targets. The other important factor is to keep your aims under review and adjust them as you get progress; for example I hope to increase my size goals for flowers to 15cm.

Achieving these aims

So, after setting these aims, how am I going to get there and what do I think will help me achieve them?

There are five main ways I try to stack the deck in my favour and these ideas are based on some basic genetic concepts and some practical steps.

I am looking for the one in a thousand plant so it stands to reason that the quicker I can grow and flower a thousand plants then the sooner I am likely to get something really special. In technical terms this reduces my mean generational time and allows me to move through many more generations of crosses and selections than would otherwise be possible. This was the basis of my previous article, 'Growing *Echinopsis* rapidly from seed' *Cactus and Succulent Review* Issue 45, June 2025 (see Back issues 2025).

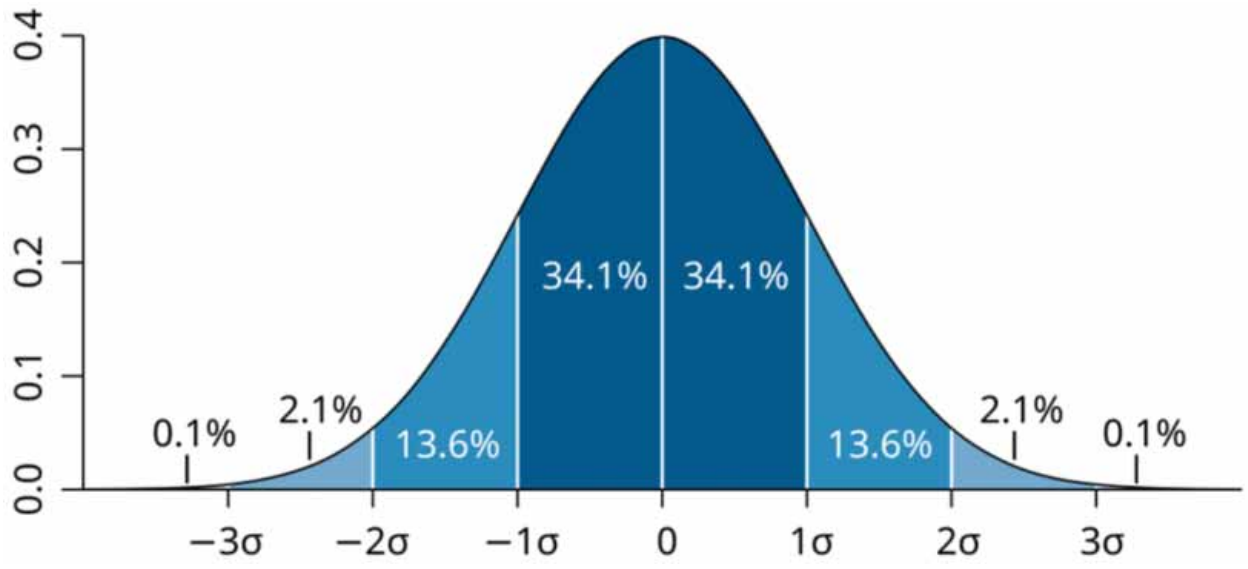
The second is that I try to be very selective in the crosses I make. I try to have clear goals in mind when making any cross after assessing its positive and negative characteristics. These goals might not be the final end points outlined above, but they may be a stepping stone on the way.

The third one is that I try to grow every seed to flowering size to select the very best from each cross.

The fourth is always to try and do any cross in both directions; i.e. to take pollen from both plants and apply it to the stigma of the other.

Finally, try to outcross at intervals if issues are cropping up.

Over the rest of this article I am going to expand a little on some of these and show how they refer back to these five choices I have made with my breeding programme.



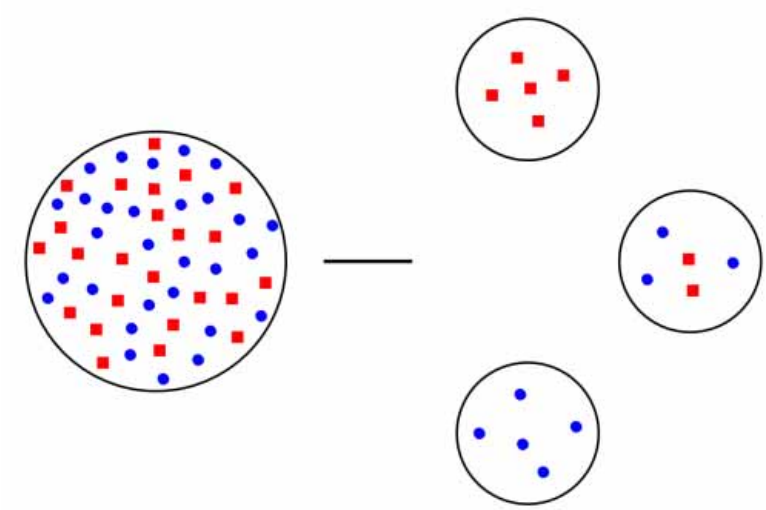
This diagram illustrates why I feel it is important to grow every possible seed and seedling to maturity and see it flower.

Imagine this diagram represents 1000 seedlings and the measurement across the bottom is whatever characteristic (or combination of characteristics) you are looking for (e.g. flower size). You can see that around 2/3rds of seedlings (the area to the left) will have characteristics that are about average. This will leave 1/6th that are better than average, but out of that 6th you can see that 2.1% are better still but then there is that 0.1% at the very edge. That is the exceptional plant – the 1 in a 1,000. If you only grew 10 plants from a cross the chance of you growing that exceptional plant (and it surviving to flower) are much reduced.

Founder effect

This is a principle in genetics that applies when any group of individuals is removed from a larger population to found a new one. In terms of a breeding programme founder effect is important because the offspring you create will almost always only be a product of the genetics contained within the plants you start with (or bring into your genetic pool along the way). The formal theory speaks to the impact of a population's gene pool based on the individuals who start it e.g. if you had an island and filled it with tall blonde people, most of the children will be tall and blonde!

So choose your starting points wisely.



The Founder Effect occurs whenever you take a small sample of individuals from a larger population. As can be seen from the diagram you can end up with a very different make-up of your breeding individuals. The smaller the sample size the more likely you are to end up with a population very different to the parent population.

Diagram from Wikipedia

This principle doesn't just apply to positive traits, it is also necessary to consider the negative aspects. I might want a characteristic from a certain plant but if it is small-flowered or hard to flower, is it worth bringing those genes into the mix?

Proportionality will also be a factor here. What I mean by this is, if I start with just small-flowered plants then it is highly unlikely that I will end up with a bunch of larger-flowered offspring (unless these genes are recessive and carried, unseen, in the founders).

A population with one (or few) large-flowered individuals and lots of small-flowered ones will result in a greater possibility of large-flowered offspring but it will require some pretty harsh and relentless selection to favour the larger-flowered offspring. Starting with plants as close to my aims as possible i.e. plants with large, multicoloured and longer-lasting flowers, tips the gene pool in my favour.

While novel mutations can and do occur, they are very rare. They are probably best discounted as a tactic and treated as a pleasant surprise if it does happen and it is a positive mutation! The main technique must be to rely on recombining the genes seen in different plants to create a new ideal.

Inbreeding, incompatibility, outcrosses and reciprocal crosses

In my experience/opinion, some strains show reduced fertility, germination and growth (taking much longer to get to flowering size) or need very particular conditions to get the best out of them. By working through multiple generations (or starting with hybrids from other breeders that have been through many generations with that breeder) some inbreeding depression may occur. This is often thought of as the accumulation of undesirable characteristics that weaken the plants and affects their growing and by extension flowering. Some strains are more susceptible to this than others.

The answer is to perform an outcross. Traditionally this is done back to earlier generations or even back to a species to bring in a selection of genes that have been lost from the strain and increase the percentage of heterozygosity (the state of having two different forms of a gene) in the offspring. It is also possible to use an unrelated hybrid from another strain which is something I have tried to do with my breeding programme.

This can create an issue of incompatibility, however. Some plants and strains are difficult to cross with others. I'm not going to say impossible here, as it is amazing what can be achieved, but sometimes this relies on a very lucky break.

I have found, for instance, that Paramount, Abbey Brook and Schick *Echinopsis* cultivars are all fairly or even very fertile with each other, but trying to cross them with Southfields' plants (especially the Bourne Razzle Dazzle strain) is proving more difficult.

Indeed I have found that often crosses (without any obvious reason) will only work in one direction so reciprocal crosses really are vital to ensure success. I am yet to fully understand if there are some significant differences between the two sides of a reciprocal cross and whether which plant is the female parent makes a significant difference to the offspring but this is something I am going to focus on in future crosses.

Got to grow them all

My third principle (and something I am fervently sticking to) is growing all the seeds from each cross and getting as many of them to flowering size as possible. I won't discard any plant (yet) that has not flowered. The day may come soon when this happens though, as something that takes 10 years to flower would have to be truly exceptional to use for future breeding when it might pass that trait on!

From photographing and logging every flower from a cross, I have found that there is considerable difference between siblings in a single cross. This means that if I am trying to select the very largest, or strongest coloured, flower this requires growing them all and flowering them for multiple years. (I am also starting to wonder if some of the best flowerers are also some of the later flowering individuals but it is still early days for this theory.)

Some breeders only grow ten or so of each cross but how are you going to select the very best if you do this? A lot of the cross may be similar but there may be a range of flower sizes, flatness and 101 other characteristics that you can only see if you flower them all.

As an example the photos below are two flowers from a cross between 'Bourne Cheer' and *Echinopsis subdenudata* made by a friend. As these were a backcross to a species I didn't grow all of these out but then I started kicking myself when these two flowered. The first had a 55mm flower with a slight lemon scent but the second was 84mm on only a 33mm body diameter. I'm hoping it may be even bigger as the plant grows. What have I missed in the seedlings I threw away?

When crossing two hybrids the variation within a cross is likely to be even higher. This comes from the increased heterozygosity of hybrids compared to plants from a pure species – especially those grown in cultivation for a number of generations. (See the section below on inadvertent selection.) In my opinion, there is a big advantage in crossing two hybrids compared to two individuals from a species as the higher genetic variability will increase the range of variation in the offspring.

Crossing two pure breeding lines (homozygous) will give you an F1 generation that will all look very similar (like either parent or halfway between the two depending on how dominant or recessive each gene is; one of the advantages of F1 hybrids in many parts of horticulture and beyond).

Two plants from a cross between 'Bourne Cheer' and *Echinopsis subdenudata* showing the difference in flower size and quality

To illustrate this I've flowered 39 out of 68 of the cross TG8 so far (from seeds supplied by a friend). While you can see some similarities in these flowers, there is considerable variation see below. If I had only grown ten, or maybe only kept the first ten that flowered, I would have missed out on a lot of worthy flowers. I wonder if any of the remaining 29 will be better or have I now just got poor growers left? Unfortunately Terry, who made this cross, only knew the female parent so this is an Abbey Brook unnamed hybrid with salmon flowers crossed with something in his collection. TG8-01 was also the first of my home-grown hybrids to flower in 21 months from seed.

However, this takes a lot of room and a really systemised way of growing which is another reason why the method outlined in my first article is very standardised in terms of pot sizes.

Unintended/inadvertent selection

This is a factor we often drastically underestimate in the hobby. Every time any of us grows a plant, flowers it and then grows the seedlings we are performing a type of selective breeding. It is selective in that we can only collect seeds from plants that flower in our conditions and set seed. Those resulting seedlings will be the ones that grow well in our conditions.

My current greenhouse is shaded for a significant part of the day and I can see that some plants simply will not reliably flower for me. Those from some breeders are more reluctant that others.

We all know that each of our greenhouses offers a slightly different microclimate – different temperature range, insulation and humidity. This means those plants you have unconsciously selected to do well in your conditions might not perform as well for others and this could be a big issue with your hybrids being grown more widely (if that is your aim).

I'm not going to suggest you should compromise your growing conditions but, if you are keen on breeding plants for others to enjoy, you will want to keep in mind this effect. I would also suggest that you trial your hybrids with some trusted friends to check that they perform well in different conditions.

Despite all of these ideas there are no guarantees! At the end of the day it may simply be that some aims are incompatible with other aims! I am beginning to believe that large, longer-lasting flowers may be physically impossible and that size may be linked to brevity of flowering, (but I might be wrong and I haven't made the right combination happen yet!).

I won't be giving up just yet on those goals though! Wish me luck! ■

Photos: Ed Seeley

Sinningia eumorpha

by Ray Stephenson

Sinningia eumorpha is a Brazilian succulent closely related to *Gloxinia*.

The large corm eventually sits above the surface and annual growth produces leaves and flowers. The flowers are quite large (5cm long) and unusual in the succulent world for their blue hue.

As it comes from the Rio Grande do Sul in Brazil, it will not suffer frosts, in fact, it is far better as a houseplant, preferring semi-shaded spots.

Photos: Ray Stephenson

This article was first published in the Newsletter of the Northumbria Branch of the British Cactus and Succulent Society

A visit to Stellenbosch University Botanical Garden

by Richard Torr

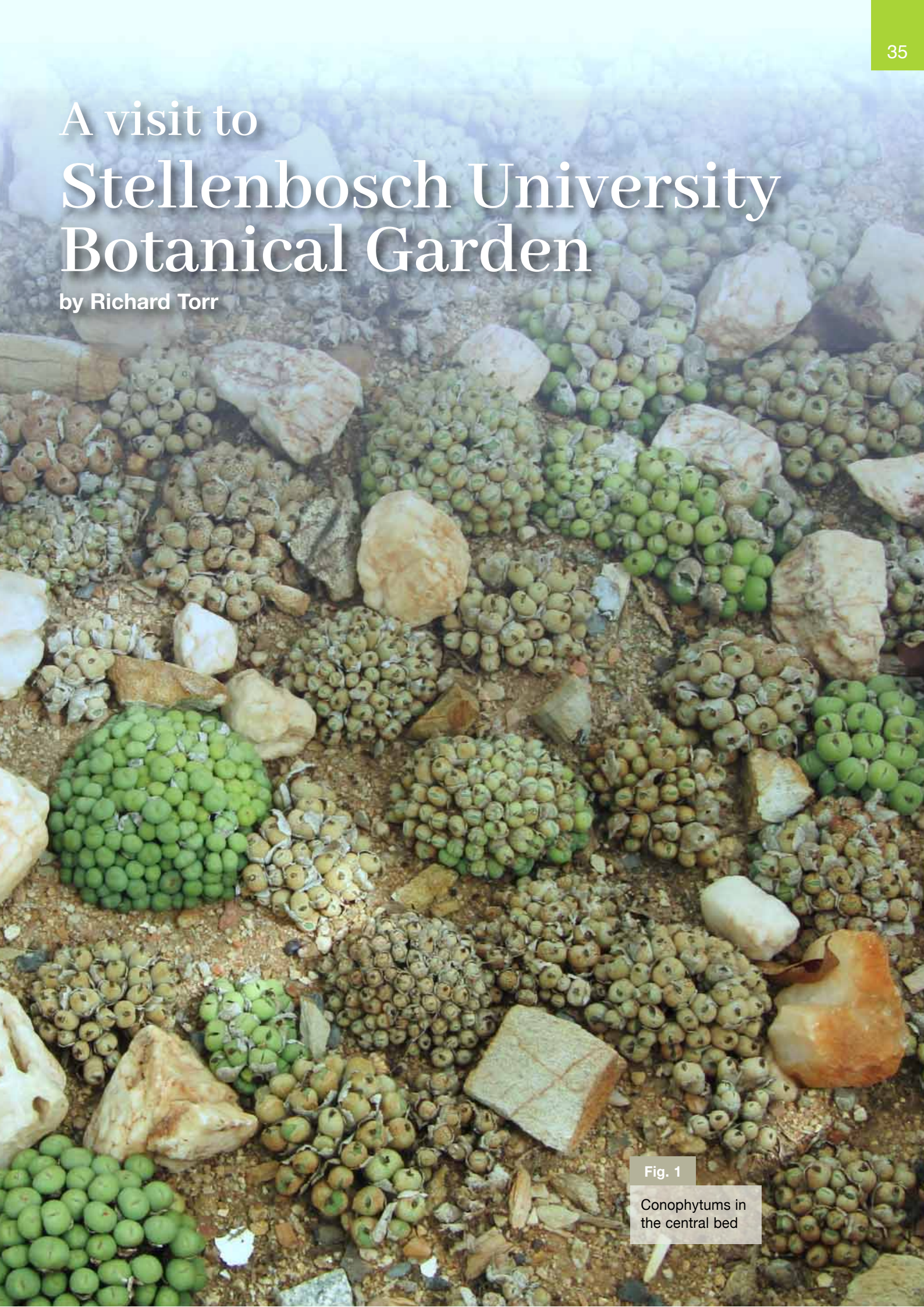


Fig. 1

Conophytums in the central bed

In November 2025, Carolyn and I revisited South Africa to spend four weeks with our good friends, Ian and Val Bratt.

As for our previous visits in 2019 and 2022, Ian and I had prepared an itinerary, this time including Kruger Park, the Cape Winelands and the Garden Route. Ian booked all the accommodation and would do all the driving while we were in South Africa. A highlight of the trip for me was a visit to Stellenbosch University Botanical Garden in mid-November.

Founded in 1679, Stellenbosch is the second oldest town in South Africa – the oldest being Cape Town – and is situated about 50km east of Cape Town airport; it is a beautiful and vibrant town. The University Botanical Garden was founded in 1908 and moved to its current location, on the corner of Neethling Street and Van Riebeeck Street, in 1922. It is the oldest botanical garden in South Africa and, although relatively small, has a strong focus on conservation with extensive collections of many plant families, both indigenous and introduced, including ferns, oxalis and insectivorous plants.

There is limited parking on site, so Ian dropped us off at the gate for a couple of hours. On entering the garden, there is only a tiny sign (Fig. 2) which seems to put more emphasis on the café than the garden, although it was a particularly good café.

Fig. 2

A very small sign

The garden is open every day, apart from Good Friday and New Years Day, and entry for Seniors is R10 (about 45p at time of visiting). We had seen many pincushion proteas, and some fading king proteas, on our travels, but a beautiful King Protea, *Protea cyanaroides*, (Fig. 3). greeted us as we entered the garden.

Fig. 3

Carolyn with the King Protea

Fig. 4
Glasshouses

As you approach the glasshouses (Fig. 4), you first pass the bonsai houses where the Western Cape Bonsai Heritage Collection is securely held; an extensive collection with hundreds of superb specimens (Figs. 6 and 7 see next page).

Interestingly, the Baobab, *Adansonia digitata* (Fig. 5), appears to be a favourite subject for the bonsai enthusiasts, as we saw several during our time in South Africa.

Fig. 5
Adansonia digitata bonsai

Fig. 6

Outside the main bonsai house

In the main bonsai house

Fig. 7

Around the glasshouses are several beds planted up with choice succulents (Fig. 8), but the real focus for this visit was inside the glasshouses, and in particular the Mesemb house.

Unfortunately, when we tried to get in the Mesemb house, we found it was locked, with entry not permitted!

Bed with aloes outside the glasshouse

Fig. 8

Disappointed, off I went to another glasshouse where I found a bed of *Welwitschia mirabilis* (Figs. 9 and 10).

I've read since that these flowered and were pollinated, but with pollen from different populations, so offspring will not be used for conservation.

Figs. 9 and 10

Above: *Welwitschia* bed and (inset)
A very old *Welwitschia mirabilis*

While I was snapping away, Carolyn had gone off to find someone in charge, explained who we were and how far we'd come, and then returned with a chaperone to take us into the Mesemb house. There had been a spate of thefts from the Mesemb collection and it was being kept locked until security could be upgraded; another example of the interest and potential trade in rare/endangered species.

Fig. 11

A well-ordered collection

Fig. 12

Many were presented in 15cm square pots

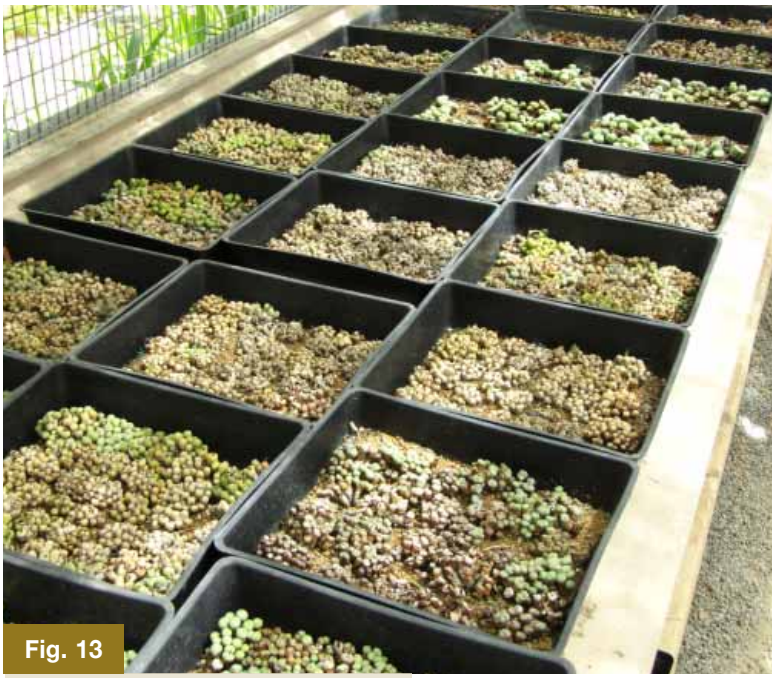


Fig. 13

Multiple plants in square trays

Fig. 14

Conophytums presented in rocky habitat beds

The Mesemb house was extremely neat and well-ordered (Fig.11). Plants were in 15cm square pots (Fig. 12), larger square trays (Fig. 13) or bedded out in a central bed (Fig. 1 see page 35). Many conophytums were planted in habitat-like rockeries (Fig. 14) which resulted in a very natural presentation.

Fig. 15

Cheiridopsis purpurea

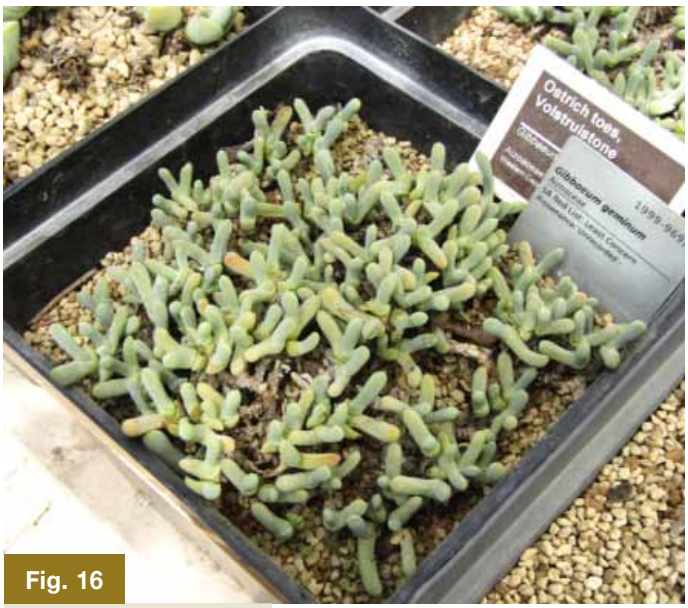


Fig. 16

Gibbaeum geminum

Fig. 17

Argyroderma pearsonii

All the hundreds, if not thousands, of plants were in excellent condition. There were far too many to list individually, but *Lithops*, *Conophytum*, *Glottiphyllum*, *Gibbaeum*, *Cheiridopsis*, *Argyroderma* and many more genera were well represented.

Many caught the eye, such as *Cheiridopsis purpurea* (Fig. 15), *Gibbaeum geminum* (Fig. 16), *Argyroderma pearsonii* (Fig. 17) named for Harold Pearson, the founder of Kirstenbosch National Botanical Garden, *Glottiphyllum nelii* (Fig. 18), and *Conophytum herreanthus* (Fig. 19).

Fig. 18

Glottiphylum nelii

Fig. 19

Conophytum herreanthus

It would have been all too easy to spend many hours wandering round the garden enjoying all the *Aloe*, *Haworthia*, *Cyphostemma*, and many more indigenous plants on display…even a few cacti!

Time was pressing, however, and we had many more sights to see during our South African visit, including Babylonstoren, with Ernst van Jaarsveld's collection, and Sheilam Cactus Gardens.

A visit to Stellenbosch University Botanical Garden is highly recommended to anyone planning a trip to the Cape Winelands. When Ian picked us up after a fantastic visit, we headed off to Fairview Wine Estate, one of our favourites, with its famous goat tower (Fig. 20), where you can sample the wonderfully named 'Goats do Roam' red wine. Cheers!

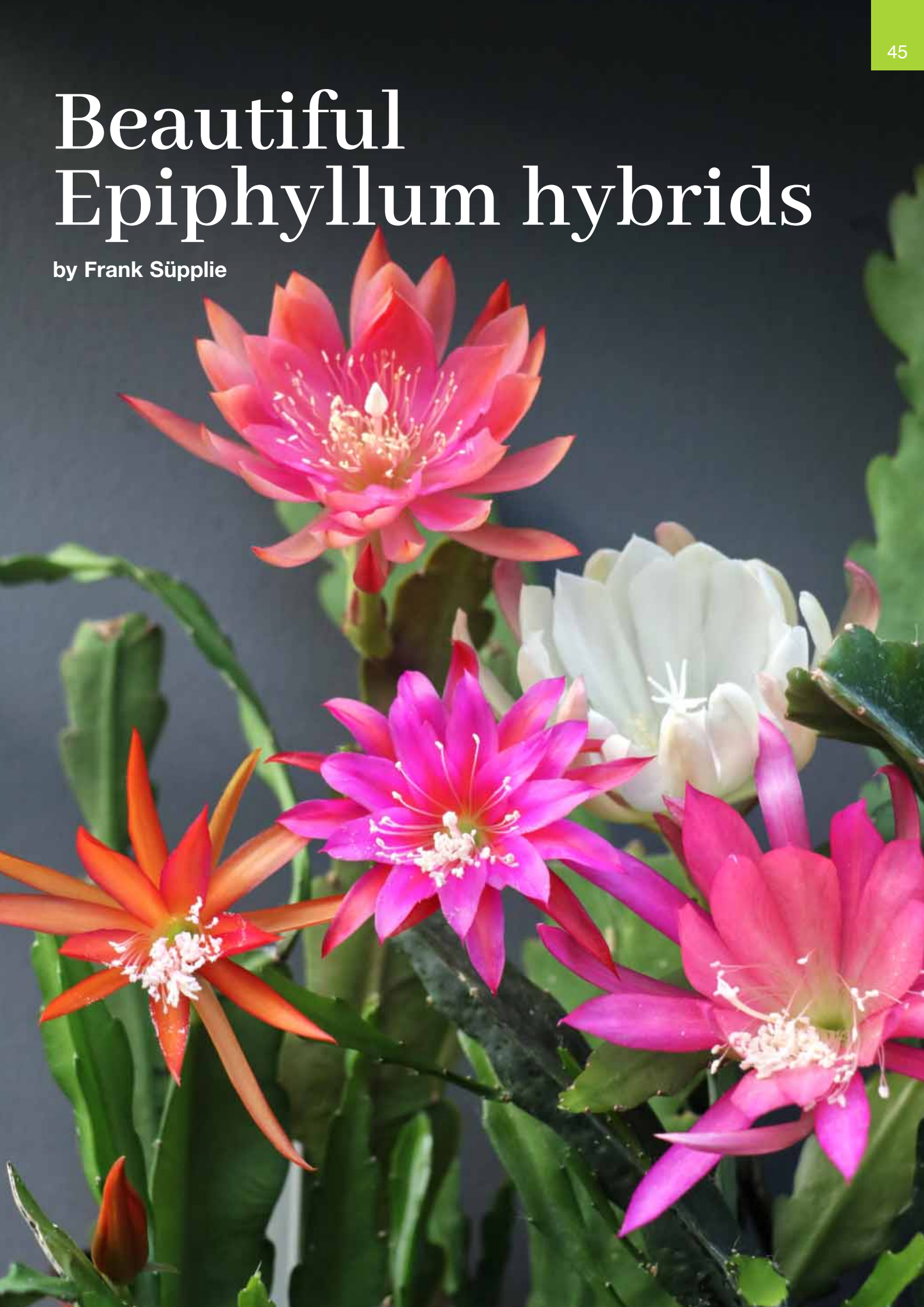
Photos: Richard Torr

Fig. 20

The goat tower at Fairview

Beautiful Epiphyllum hybrids

by Frank Süpplie



In this article I would like to show you some of the *Epiphyllum* hybrids I have registered as new in the period 2019 to 2024.

For more than 40 years I have been involved with making hybrids, I started when I was six years old. A life-time passion or addiction, or a curse? It depends on the day actually.

You have this enormous collection with more than 15,000 named *Epiphyllum* hybrids to maintain. Not always going well. But a good gardener has lost many plants in his life I tell myself.

So here you are seeing some of my creations. Some are easy growers, some not. But in general the culture of these plants is the same as that for all *Epiphyllum* hybrids.

The *Epiphyllum* hybrids shown here have been registered with the Registry of Hybrids and Species maintained by the Epiphyllum Society of America.

The information given is as follows:

The hybrid name plus the initials of the hybridiser (FAS) and the year registered.

A description of the hybrid.

Flower size:

S Small 6–13cm (2.5–5 inches)
M Medium 13–18cm (5–7 inches)
L Large 18–23cm (7–9 inches)
XL Extra Large over 23cm (9 inches).

The parentage and registration number.

Notes on the name.

Boys of Ireland FAS 2022

Description: First two rows of petals ruffled pink with orange to yellow mid-stripe. Next two rows fuchsine with orange mid-stripe. Outer petals purple with orange mid-stripe. Stamens orange. Style orange-rose. Double, cup and saucer form. Stiff, thick, flat, three-angled, branched, basket growth. (XL) 'Dracula's Sister' × 'Fountain of Truth'. Registration number ESA #15466

Notes Beautiful colouration of the flower petals.

8th of June FAS 2019

Description: Inner petals dominant pink with red mid-stripe. Outer petals pink edge with red centre. Wide, multi-petalled form, 80 flower petals and more. Stiff, flat and three-angled growth. (XL) 'Hans Mitterer' × 'American Sweetheart'.
Registration number ESA #14832

Angela Merkel FAS 2019

Description: Silky, orange-red inner petals with pink-red edge and orange mid-stripe. Outer petals solid red. Overlapping, cup and saucer form. Flat and three-angled, thick growth. (M) 'Dracula'-FOB/JWT × 'Jicaro'.
Registration number ESA #14844

Notes: Named after the Chancellor of Germany 2005-2021.

Dancing with a stranger FAS 2020

Description: Inner petals orange-red with a fuchsine edge, yellow base, and a red-orange mid-stripe. Outer petals orange-red with a fuchsine edge. Overlapping cup and saucer form. Thick/stiff flat and three-angled basket growth. Areoles have bristles and are felted. (L) 'Stern Von Erlau' × 'Sherman E. Beahm'. Registration number ESA #14952

Notes: Named after the song from the UK singer Sam Smith.

Arthur von Eppinghoven FAS 2021

Description: Inner petals crepe-like, dark red with orange mid-stripe. Second row red with orange mid-stripe. Outer petals orange with lighter orange mid-stripe. (M) 'Deja Vu' × 'Diva Midori'.
Registration number ESA #15218

Notes: Named after the illegitimate son of King Leopold I of Belgium.

Bob Rouse FAS 2021

Description: Inner petals pale yellow with a darker yellow mid-stripe, wavy. Next row dark yellow with lighter yellow mid-stripe. Outer petals yellow with orange, brown tip, lanceolate. (L) 'Deutschlands Hoffnung' × 'Marie Josephine'.
Registration number ESA #15226.

Notes: Named after my good UK friend.

Apaches White Spirit FAS 2019

Description: Several inner rows of silky, solid white petals. Outer petals yellow-white with a yellow mid-stripe. Multi-petalled, cup and saucer form, more than 80 flower petals. Flat and three-angled, stiff, basket growth. (L) 'Barbara Ruth De Carli' × 'My Gosh'.
Registration number ESA #14835.

John Curry FAS 2019

Description: Ruffled, waxy inner petals white. Middle petal rows white with yellow tips. Outer petal rows orange with dark yellow mid-stripe. Double, cup and saucer form. Flat, three- and four-angled, stiff, basket growth. (XL) 'Lemon Custard' × 'Dr. Rudi Dorsch'. Registration number ESA #14860.

Notes: John Anthony Curry, OBE (9 September 1949 – 15 April 1994) was a British figure skater and the 1976 European, World and Olympic Champion.

Ruud Gullit FAS 2021

Description: Yellow with a white throat and ochre edge. Outer petals brown-red with a yellow mid-stripe. (S) 'Pitti Paetz' × 'William Clark'. Registration number ESA #15353.

Notes: Named after a Dutch soccer player, who played in Italy, called the Black Tulip.

Castlebar FAS 2019

Description: Silky inner petals, peach with a darker mid-stripe and yellow edge. Outer petals rose-peach. Overlapping, cup and saucer form. Flat and three-angled, stiff, tall growth. (M-L) 'Rheingold' × 'Royal Rose'. Registration number ESA #14901.

Notes: 'Rheingold' is a nearly forgotten *Epiphyllum* hybrid from Curt Knebel. Before WWII it was distributed in the USA and renamed by the *Epiphyllum* nursery Cactuspete in 1939. Castlebar, the county town of County Mayo, is located in the west of Ireland situated in the province of Connacht, approximately in the centre of the county.

Emperor Yōzei FAS 2019

Description: Waxy inner petals, rose with a white throat. Middle petal rows rose with lighter mid-stripe. Outer petals orange with yellow mid-stripe. Overlapping, cup and saucer form. Three- and four-angled, stiff, thick, branched growth. (S) 'Lemon Custard' × 'Dr. Rudi Dorsch'. Registration number ESA #14863.

Notes: Emperor Yōzei was the 57th Emperor of Japan, best known for his short and turbulent reign, from 876 to 884, during the Heian period.

Marieke Schouten FAS 2019

Description: Velvety inner petals, cream with apricot mid-stripe. Middle rows apricot with orange mid-stripe. Outer petals orange. Overlapping, cup and saucer form. Three- and four-angled, thick, basket growth. (L) 'Lemon Custard' × 'Dr. Rudi Dorsch'. Registration number ESA #14852

Notes: Named after an employee of the Epric Foundation.

Duncan Laurence FAS 2019

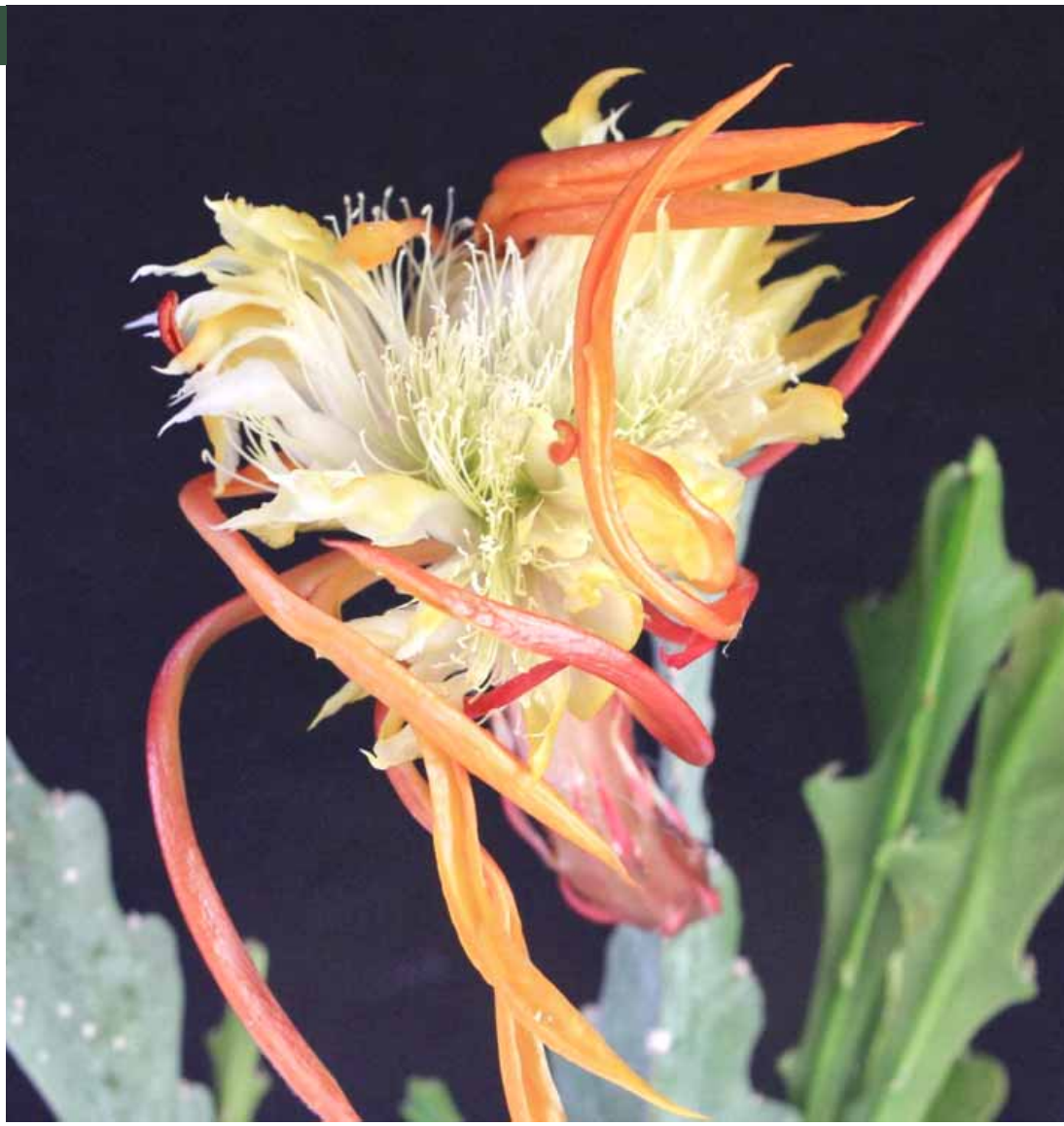
Description: Yellow petals edged with darker copper yellow. Pink-red throat. Outward curved petal tips. Overlapping, cup and saucer form. Thick, flat, stiff growth. (L) 'Pegasus' × 'King Midas'.
Registration number ESA #14836

Notes: Dutch singer, winner of the Eurovision song contest 2019, his real name is Duncan de Moor.

Djer FAS 2019

Description: Waxy, narrow and crinkled inner petals cream with yellow tips. Outer petals yellow with red mid-stripe, multi-petalled up to 80 flower petals. Irregular form. Flat, three- and four-angled, stiff and branched, basket growth. (L) 'Hans Mitterer' × 'American Sweetheart'.
Registration number ESA #14862

Notes: Djer was an ancient Egyptian pharaoh of the 1st Dynasty during the Early Dynastic Period, who reigned from approximately 2980 to 2940 BC. He is considered the second or third ruler of this dynasty and probably succeeded Hor-Aha.



Hope at better times FAS 2020

Description: Inner petals white with a raspberry mid-stripe. Next row raspberry with a fuchsine edge. Outer petals raspberry. Overlapping cup and saucer form. Thick/stiff flat and three-angled basket growth. Areoles have bristles and are felted. (L) 'Clown' × 'Aventine'. Registration number ESA #14954

Notes: I named it after a long health battle for me, ending in a wheelchair then getting better.

Las Vegas Queen FAS 2021

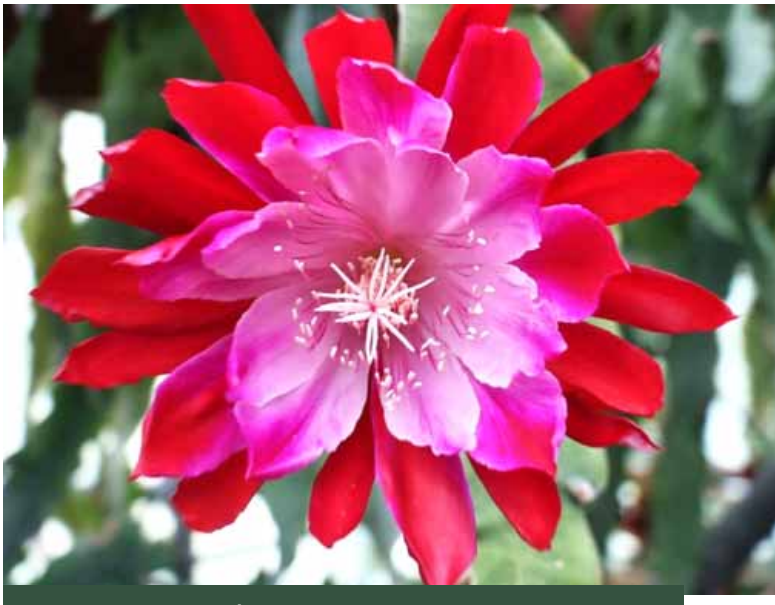
Description: Inner petals hot pink with red mid stripe. Second row of petals red-orange. Third and fourth row red and lanceolate. Nearly 70 petals. (L) ('Heureka × Flore Pleno') × ('American Sweetheart × Hans Mitterer'). Registration number ESA #15300

Notes: Three of the four parents are old Curt Knebel hybrids and 'Heureka' and 'Flore Pleno' are his famous multi-petalled ones, described in 1933-1935.

Kontich FAS 2021

Description: First row of petals fuchsine with orange mid stripe and ruffled. Outer petals pink-orange with fuchsine edge and orange-red mid stripe. (L) 'Dracula (FOB)JWT' × 'Dancing with a stranger'. Registration number ESA #15299

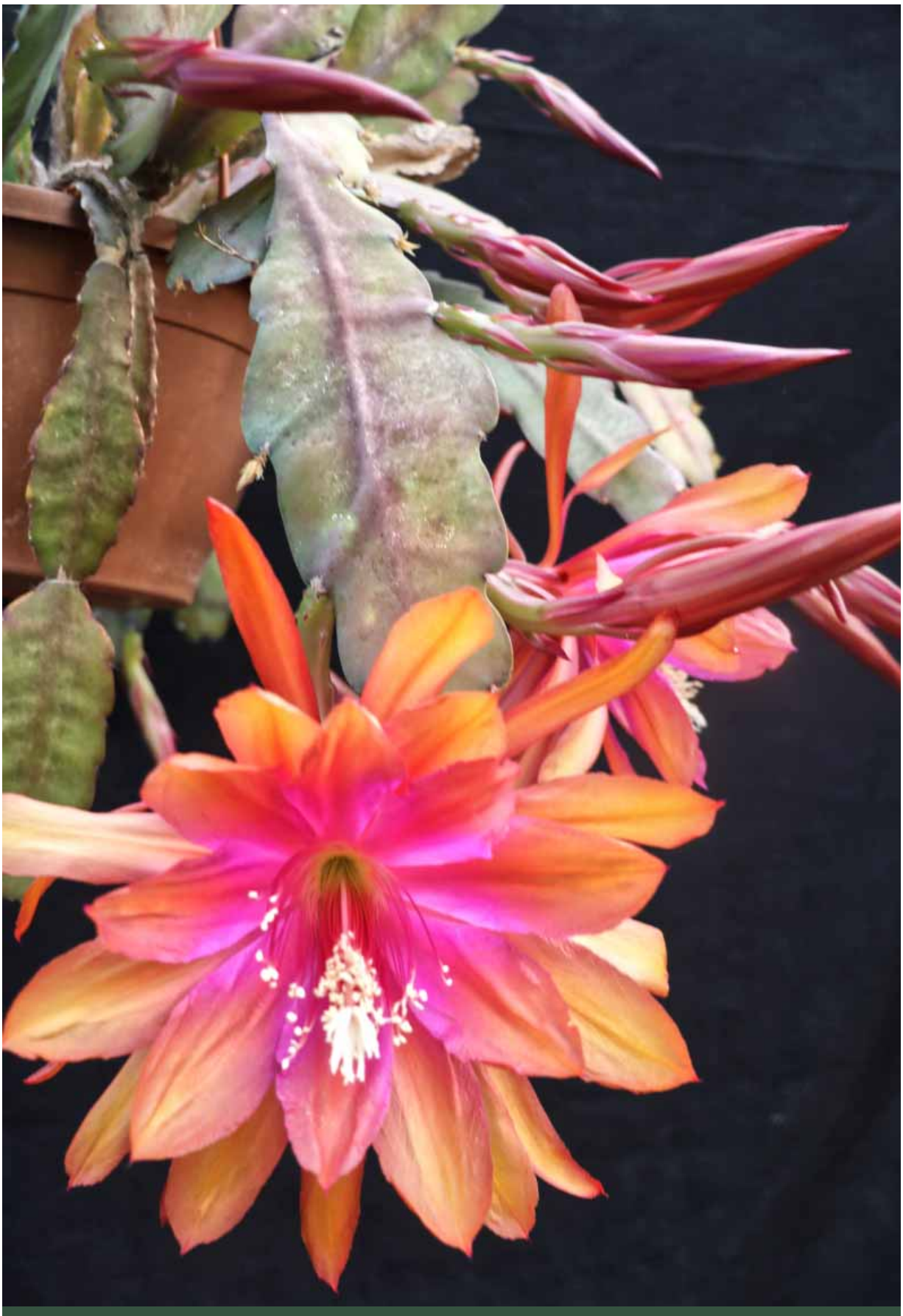
Notes: Named after the place in Belgium where Franz de Laet, a famous orchid cactus grower, lived up to 1928.



Peter Carl Fabergé FAS 2019

Description: Inner rows of petals ruffled, raspberry with white edge and rose centre. Middle row of petals cream with fuchsia edge. Outer petals raspberry red. Overlapping, cup and saucer form. Flat and three-angled, thick, tall growth. (XL) 'Aventine' × 'Clown'. Registration number ESA #14848.

Notes: Named after the famous Russian jeweller (1846-1920)



Luik FAS 2021

Description: Inner petals orange-yellow with fuchsine edge at base. Crinkled. Next three rows orange-yellow with orange edge. Outer petals orange-red. (M-L) ‘Aventine’ × ‘Clown’. Registration number ESA #1530

Notes: Named after the city in Belgium.

Gardening with succulents in northern England

by Joel Robinson

More experiences of growing cacti and succulents in West Yorkshire

At the time of writing it's mid-March and we're coming out of an extremely wet winter with a couple of longer freezes, down to around –7°C, for periods long enough to kill the above-ground growth on just about anything herbaceous.

This will be my fifth year since moving to a house with a bigger garden that faces south-east and three years since my last article for the *Cactus and Succulent Review* Issue 37, June 2023 (Back issues 2023).

The garden slopes steeply over four levels with 49 steps in total. On the upper levels I have created raised beds from sleepers filled with a lot of horticultural grit. I provide winter protection in the form of simple polycarbonate shelters for most of the cacti and succulents I grow.

My collection, grown in two greenhouses and planted in the garden, includes *Yucca*, *Beschorneria*, agaves, aloes, cacti, mesembs, borderline succulent plants such as *Lewisia* and terrestrial bromeliads such as *Puya*, *Dyckia*, *Ochagavia* and *Fascicularia*.

I grow a lot of plants from seed and I have had increasing success with seeds collected from my own plants and hybridising the ones that do well for me.

Aloes

Aloe polyphylla is one plant which seems to like the climate of northern England as long as it's kept well protected from wet in the winter months. Hopefully this year I'll have two plants in flower for the first time.

A double headed *Aloe polyphylla* in flower in June 2025

Seedlings currently in my propagator are (in theory) *Aloe polyphylla* × (*Aristaloe aristata* × *polyphylla*). That probably isn't the correct way to describe this hybrid but it hopefully makes sense.

I'm hoping for something unusual and cold hardy. The pollen parent *Aristaloe aristata* × *polyphylla* was produced in 2020. The plants are not remarkable except they may have facilitated the cross in reverse. There are differences from the seed parent both florally and in size but in the main these plants look like *Aristaloe aristata*.

Strangely all the *Aloe polyphylla* I have grown to maturity have turned into double-headed plants. I hope that when I remove the polycarbonate shelters there will be the beginnings of flower buds. It's not unheard of for *Aloe polyphylla* to skip a year but they usually flower every year once flowering age is reached, which usually takes seven to ten years from seed.

I have tried other aloes in the garden and I have others to try but the three reliable species are *Aloiampelos striatula*, *Aristaloe aristata* and *Aloe polyphylla*.

It's probably a more regular occurrence further south but 2025 was the first year I have had seed set on *Aloiampelos striatula* (both var. *striatula* and var. *caesia*) and *Beschorneria yuccoides*. I'm not sure what I'll do with all the seedlings!

Aloe polyphylla hybrid seedlings

Cacti

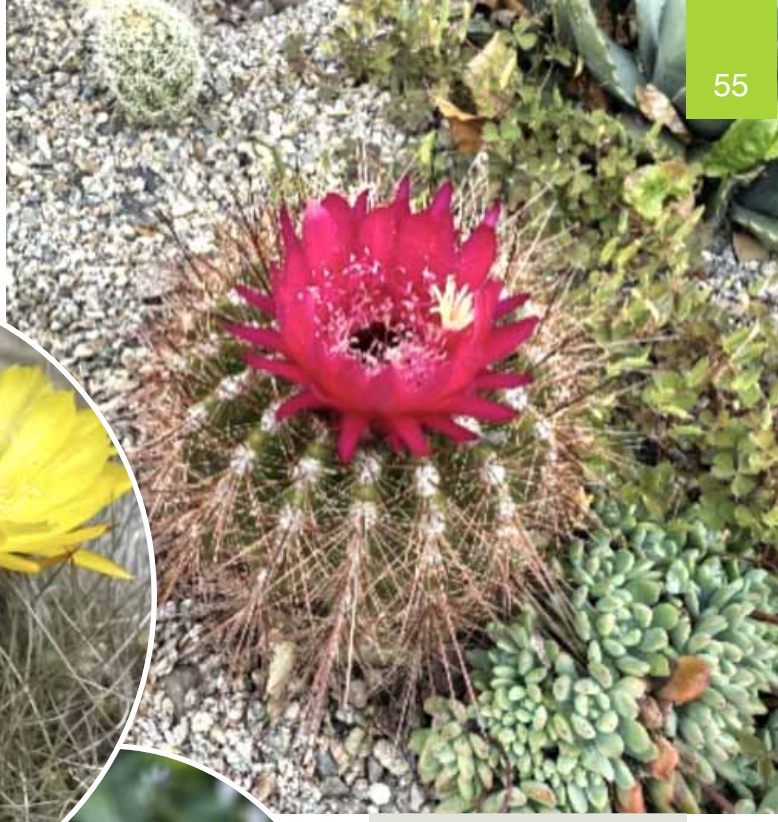
I grow a few *Echinocereus* in my raised beds and have found my hybrids involving *E. reichenbachii* and *E. stramineus* to be strong healthy plants which are happy planted there. The huge flowers in May are beautiful.

Echinocereus reichenbachii × *E. stramineus*

Echinocereus rigidisimus

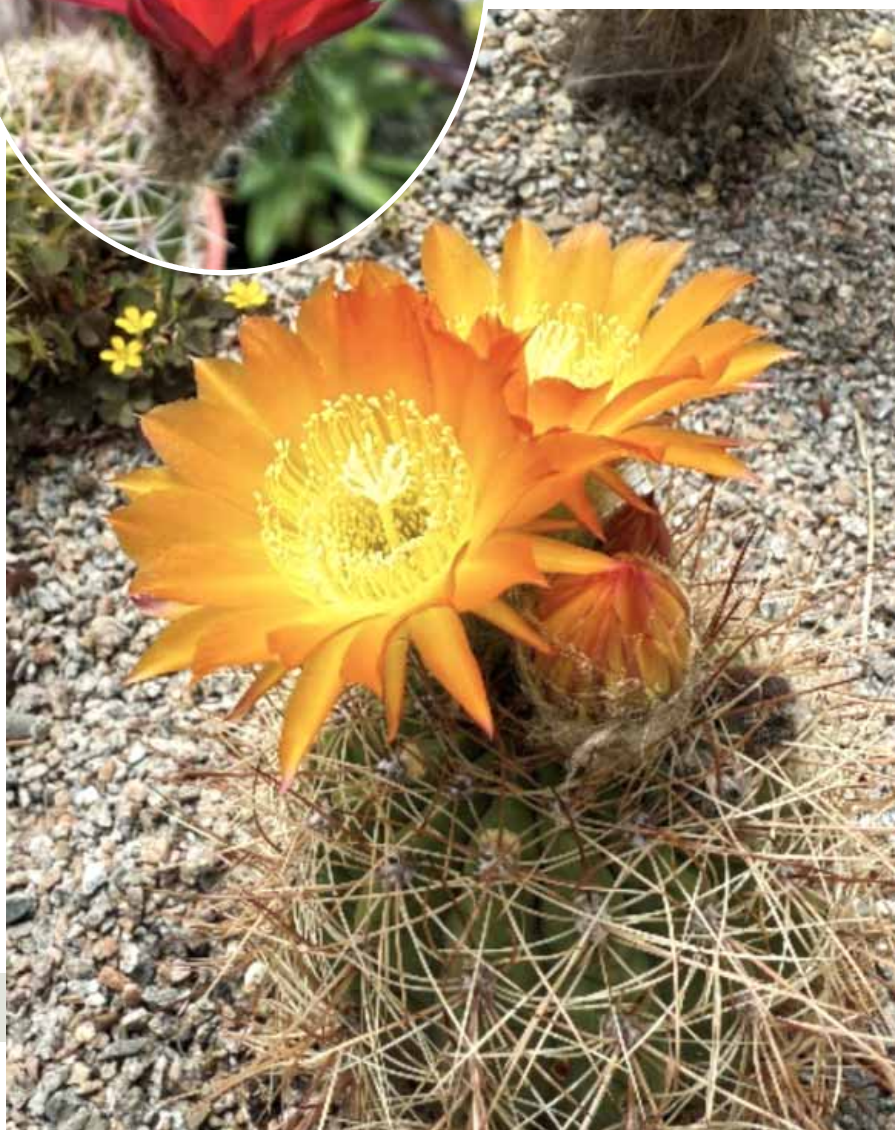
Soehrensia formosa (*Echinopsis formosa*) named varieties and subspecies do well in my garden. With the help of a very old specimen of subsp. *formosa* which flowers reliably every year, an artist's paintbrush and whatever else is in flower, interesting results can be achieved.

Soehrensia (*Echinopsis*) *formosa* from seed 1963 and (top inset) *Soehrensia* (*Echinopsis*) *formosa* flowers



Soehrensia (*Echinopsis*) *formosa* subsp. *randallii*

Soehrensia (*Echinopsis*) hybrid seedling



Soehrensia (*Echinopsis*) *bruchii*

Trichocereus (now *Leucostele*) *terscheckii* is widely considered the most cold and moisture tolerant columnar cactus and as such, the best for a UK garden. *Trichocereus pasacana* (*Leucostele atacamensis* subsp. *pasacana*) depending on provenance might be even hardier. I have a few seed-grown plants and at least one will be planted out this year.

Of all the opuntias I have tried in the garden, *Opuntia scheeri* has been the best performer in terms of size of cladodes and reliable hardiness. *O. engelmannii* is a close second.

Opuntia scheeri needs no winter protection

Echinopsis (*Leucostele*) *terscheckii*

Agaves

I've been growing agaves for nearly 20 years with successes and failures along the way. I have yet to have any real success with *Agave ovatifolia* which should be one of the best agaves for the garden.

One of the first agaves I grew from seed was *Agave montana* which, until a year ago,when it was planted out was starting to look quite sorry for itself. Now it's putting down roots and looking better than ever. It's quite a broad-leaved, toothy example of *A. montana*, the best of a batch of seeds from circa. 2009.

Agave montana raised from seed

Agave montana a newly acquired plant

An *Agave mitis* I grew from seed sadly didn't make it through the 2024/25 winter. This was pictured in my 2023 article. Heavy snow early in the season followed by a week long freeze seemed to do the damage.

I have another *Agave mitis*, *A. mitis* var. *albidior,* which is still doing well. I was surprised with the speed of growth from *Agave mitis*. Planted out as eight-year old plants filling 30cm bowls, they doubled in size in a year but I'm probably pushing my luck trying to grow these in northern England. I replaced the lost plant with another *Agave montana* which has sailed through its first winter.

Agave mitis

Agave filifera subsp. *schidigera*

Agave hybrid seedling

A *Mangave* with cold hardiness

Agave filifera subsp. *schidigera* seems happy in my garden. It's hardy to –10°C and habitat rainfall levels are comparable to the driest parts of the UK. It differs from the species type (subsp. *filifera*) in that it does not offset and is slightly hardier. I think one of my plants is going to flower soon.

Agave wocomahi and a hybrid involving *A. obscura* and *A. lophantha* flowered and produced viable seed and those plants are now good-sized seedlings. One or two are turning into interesting plants with subtle differences from the seed parents.

Mangaves are mostly tender plants which need a heated greenhouse for the winter but one I've had for more than a decade was grown from seed kindly sent to me by a UK grower who crossed *Manfreda virginica* with *Agave obscura*, two relatively cold hardy species. This one definitely has some hardiness and flowered last year for the first time in 12 years. As expected the main plant has died back but offsets are growing well.

Mesembs

I've tried many *Delosperma* over the years and there are a few currently doing well for me, 'John Proffitt' being one. I have long ago lost the label for the pink flowered one but I like it a lot. *Rabiea difformis* does well in the right spot. The plant pictured was flowering in December. While tender, the colourful flowers of *Lampranthus* are worth the trouble. I have tried several *Ruschia* species in the garden and I know *Ruschia pulvinaris* is hardy.

Delosperma 'John Proffitt'

Pink flowered *Delosperma*

Rabiea difformis

Lampranthus sp

Companion plants – just a couple worthy of mention

Lewisia

Lewisia 'Sunset Strain'

Popular with Alpine growers, *Lewisia* are North American succulent plants which are perfectly at home growing among larger more architectural plants.

The plant shown was grown from seed I purchased as 'Sunset Strain' from Mesa Garden, New Mexico when it was under the ownership of Steven Brack. I love the colour of these flowers.

Ochagavia

Ochagavia carnea

Among the Bromeliaceae that I grow *Ochagavia carnea* is a favourite. This year there are five inflorescences on one plant.

Ochagavia litoralis is more tender and spends its winters in a heated greenhouse.

Looking ahead

There will always be new projects in the garden. This year I'll be moving a greenhouse and developing a new planting area hopefully with the incorporation of rockery stone.

I would like to protect fewer plants but as far north as I am, I may just need to adopt less labour intensive methods. I also look forward to the planting having more height and maturity.

I opened my garden for charity last year for the first time and hope to do so again in the near future. ■

Photos: Joel Robinson

Countdown to Cactus at the Castle

5–6 September 2026

by Vicky Davies

There's now fewer than 100 days to go and the excitement is beginning to build for Cactus at the Castle 2026. The event continues to grow year on year and we look forward to welcoming everyone to Lullingstone Castle, Eynsford, Kent on 5-6 September. Don't forget to claim your half price entry voucher as a Cactus and Succulent Review reader (details page 63).

The weekend is set to be jam-packed with goings on. The extensive mart will run over both days again with three marquees and outdoor sales space filled to capacity.

The ever popular Bring and Sell auction will take place on Saturday afternoon with visitors invited to bring a plant or more to enter in the auction for a small fee. More details can be found on our website and do contact us if you would like to auction off a large group of plants as we may be able to help with transport.

As a mark of respect for Dr. Tony Mace, who sadly passed away in March after a lifetime supporting the hobby, we are organising 'A Tribute for Tony', a series of short talks that will take place on Saturday 5th September in the chapel. Talks will be on groups of plants in which Tony had a particular interest, including opuntiads and notocacti.

Tony has been a regular at Cactus at the Castle since the beginning, bringing plants to sell from Mace Cacti and later supporting the Brighton and Hove BCSS branch stand. He had been heavily involved with the BCSS throughout his life including being a Trustee of the Society and was the creator of the repository of cactus and succulent knowledge that is the Cactus Mall website.

Inside one of the sales marquees

Haworthia Growers UK Show

Sunday may prove to be just as busy with the Haworthia Growers UK show incorporating the Lullingstone Open show. Come and see some of the finest haworthias and allied genera on display for the group's first ever show. The show is open to all to enter and includes classes for cacti and other succulents. All those entering the show receive free admission to the event on the Sunday.

Haworthia Growers UK have also organised a special talk by Dr. Adrian Weatherill, which will take place on Sunday afternoon in the Chapel. Adrian has been growing haworthias for over 40 years and has seen the hobby grow and develop greatly over that time. The talk will briefly look at the history of these plants in cultivation and show how haworthias have evolved over time. It will also discuss their cultivation and propagation needs including a few things to avoid. The talk will finish with images of some of the best plants from around the world.

Haworthia kuroshima
(Photo: Adrian Weatherill)

Download the Show Schedule now

Cactus at the Castle
HGUK Group
Or scan the QR code

Haworthia Growers UK is a Facebook based group which is open to anyone who loves these fascinating plants.
HGUK Group

For those looking to entertain the whole family join us for Lullingstone's Mexican Funday Sunday with the return of the marvellous Mariachi Band from 2025.

There will also be Mexican themed games, a treasure hunt with prizes and face-painting.

The fabulous Blue Agave Bar will be present over both days serving a great range of drinks including Mexican-inspired cocktails and delicious Harvey's ales.

If you fancy some mighty morsels, T's Tacos will be serving up their mouthwatering Mexican street food once again.

If this isn't enough, there's the World Garden, the castle and its grounds to explore and Tom Hart Dyke will be giving his unique tours on both days. ■

For more details see the
Cactus at the Castle website

Photos: Vicky Davies unless specified otherwise

The Mariachi Band playing in front of Lullingstone's historic gatehouse

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Cactus and Succulent Review

Cactus at the Castle

5-6 September 2026

Reduced price entry for readers of the Cactus and Succulent Review

To claim this please email to request a voucher to be displayed at the gate on arrival.

One day voucher Admits two adults £7.00 per person

One day only – Saturday or Sunday

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To claim your voucher please email contact@cactusandsucculentreview.org.uk

Please indicate if you require a voucher for one or two days

Last date for requesting vouchers is midday on Friday 4 September.

The World Garden

Lullingstone Castle Eynsford Kent, DA4 0JA

Founded in 2005, Tom Hart Dyke's World Garden pays homage to the amazing achievements of Victorian and Edwardian plant hunters who brought back the plants and flowers we now cherish and grow in our gardens in the UK.

'Absolutely beautiful, will certainly be returning and sharing with friends to come and visit'

Admission

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